REMARKS

Claims 1-8 are pending in this application. Claims 1, 6, and 7 are independent claims. Claim 8 has been added.

Objections to the Specification

The Abstract has been objected to, primarily because it merely recites claim 1. A new Abstract is provided herewith that summarizes the basic improvement set forth in the invention.

The specification has also been objected to. Claim amendments have been made to clarify the correspondence between the claims and the drawings. Also, a discussion of the specification with respect to the drawings and claims, provided below with respect to the prior art rejection, should help in understanding the invention.

Claim Objections

Claims 2-5 have been objected to under 37 CFR 1.75(c), as being improper dependent form. In particular, the Office Action alleges that the dependent claims recite identical limitations as in the parent independent claim. Applicant disagrees.

Claim 2, for example, recites the further feature of "an attribute information preliminarily added to each document data."

Claim 3 recites the further feature of "an importance calculation section for performing the same importance calculation."

Claims 4 and 5 recite further limitations for the key word deriving section.

Applicant respectfully requests that the objection to the claims be withdrawn.

Claim Rejection – 35 USC 112

Claims 1-7 have been rejected under 35 U.S.C. 112, first paragraph, as not being enabled. In particular, the Office Action alleges that the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and use the invention. Applicant disagrees.

As mentioned above, the claims have been amended to clarify the correspondence between the claims and the drawings. A discussion of the specification with respect to the drawings and claims, provided below with respect to the prior art rejection, should help in understanding the invention.

Claim Rejection - 35 U.S.C. 102

Claims 1-7 have been rejected under 35 U.S.C. 102(b) as being anticipated by Driscoll (U.S. Patent 5,642,502). Applicant respectfully traverses this rejection.

The present invention produces class-specific key words from a document set. In particular, an importance of a word is defined to take into account the number of documents in a corresponding class which the word appears in. A class may be for example, author. An importance value of a word is based on a ratio of the count value of a word in a corresponding class to the number of documents in the class, less the ratio of the count value of the word in other classes to the number of documents in the other classes (see equation on page 21). Words are sorted by importance in each class (example classes include executive, planner, engineer). A characteristic key word in each class may be derived from the document set.

In an alternative embodiment, instead of a difference in ratios, the first ratio is divided by the second ratio (see equation on page 25). By using the alternative approach to calculating importance, the variation in the magnitude of the importance will not be effected by the number of documents.

Claim 1 is directed to a key word deriving device comprising a document data acquiring section for acquiring document data each

having a parameter previously added thereto and for registering the document data including words and the parameter to a document table (e.g., Target Data Selecting Section 1, Fig. 2; Specification, page 16, ln.22, to page 17, ln.17; and an example document table shown in Fig. 3), a document data dividing section for dividing the acquired document data for each type of the parameter (i.e., a class) by distinguishing the types of parameters of the document data (e.g., Target Data Dividing Section 2, Fig. 4; Specification, page 18, ln. 1, to page 19, ln.6; e.g., parameter "author" and types include Executive A, Planner A, Engineer A, etc.), and for generating a word list of words contained in the divided data and their statistical amounts (e.g., word list: Figs. 5, 6, 7), a word table registering section for calculating and registering, in a word-count table, the statistical amounts of the words in the divided data having the same type of a parameter added thereto by referring to the word list (e.g., Partial Statistical Processing Section 3, Fig. 9; Specification, page 19, ln. 7, to page 20, ln.18; word-count table: Figs. 10-12), an importance table registering section for calculating an importance of each word in accordance with a preliminary prepared importance calculation formula by referring to the word-count table and for registering the importance of each word in an importance table (e.g., Result Comparing Section 4, Fig. 13; Specification, page 20, ln.19, to

page 22, ln.9; importance table: Figs. 14-16), and a keyword deriving section for deriving a word having a higher importance as a key word by referring to the importance table (e.g., Key Word Deriving Section 5, Fig. 17; Specification, page 22, ln. 10, to page 23, ln.2; sorted word importance table: Figs. 18-20).

Driscoll appears to teach a document retrieval system capable of natural language queries. Within the retrieval process, a list of words is generated for each document (Figure 6). Then, for each word, the number of documents that the word is in is generated (Figure 7). Also, for each word, a measure of importance is calculated. The measure of importance of a word is a statistical formula, e.g., inverse document frequency.

As can be seen in claim 1, the importance table registering section calculates an importance of each word by referring to a word-count table. The word-count table contains divided data having the same type of a parameter (word table registering section). The divided data is provided by the document data dividing section which divides the acquired document data for each type of the parameter (document data dividing section). Thus, each word in the claimed importance table is grouped by a type of the parameter.

Applicant submits that Driscoll does not teach or suggest at least, "an importance table registering section for calculating an importance of each word in accordance with a preliminary prepared

importance calculation formula by referring to the word-count table and for registering the importance of each word in an importance table" in the context claimed in claim 1. In other words, Driscoll does not appear to divide document data based on a class (document data dividing section), and in turn calculate an importance of each word within a table separately for each class (importance table registering section).

The same argument applies as well for independent claims 6 and 7. Claim 6 recites "dividing the acquired document data for each type of the parameter," and "calculating an importance of each word …for each of the divided document data." Claim 7 recites the same functions as in claim 1.

Thus, Applicant respectfully requests that the rejection be withdrawn.

New Claim

New claim 8 has been added which specifically recites the "preliminary prepared importance calculation formula" of claim 1. Applicant submits that Driscoll does not teach or suggest this claimed importance formula.

CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert W. Downs (Reg. No. 48,222) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant respectfully petitions for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of $110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment(s)   (Rev. 09/30/03)